IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA

LAMBETH MAGNETIC STRUCTURES, LLC, Plaintiff, v. SEAGATE TECHNOLOGY (US) HOLDINGS, INC. and SEAGATE TECHNOLOGY LLC Defendants.	CIVIL ACTION NO. **JURY TRIAL DEMANDED**

COMPLAINT AND DEMAND FOR TRIAL BY JURY

Plaintiff Lambeth Magnetic Structures, LLC, with a principal place of business at 1230 Squirrel Hill Avenue, Pittsburgh, Pennsylvania 15217 ("LMS"), alleges the following for its complaint against defendants Seagate Technology (US) Holdings, Inc. and Seagate Technology LLC (collectively "Defendants" or "Seagate").

NATURE OF THE ACTION

1. This is a civil action for infringement of United States Patent No. 7,128,988 ("'988 Patent"). The action arises under the laws of the United States related to patents, including 35 U.S.C. § 281.

PARTIES

2. LMS is a limited liability company organized and existing under the laws of Pennsylvania, having its principal place of business at 1230 Squirrel Hill Avenue, Pittsburgh, Pennsylvania 15217.

3. Upon information and belief, Defendant Seagate Technology (US) Holdings, Inc. is a corporation incorporated under the laws of the State of Delaware and has a principal place of business at 10200 South De Anza Boulevard, Cupertino, California 95014.

4. Upon information and belief, Seagate Technology (US) Holdings, Inc. is a corporate parent of Seagate Technology LLC.

5. Upon information and belief, Seagate Technology LLC is a limited liability company organized and existing under the laws of the state of Delaware, with its principal place of business in Cupertino, California. Upon information and belief, Seagate Technology LLC develops, manufactures, imports, offers for sale and sells certain products, including hard disk drives, for consumers in the United States including in the Western District of Pennsylvania.

JURISDICTION AND VENUE

6. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a), because this action concerns infringement of a United States patent.

7. This Court has personal jurisdiction over Seagate at least by virtue of Seagate regularly transacting or soliciting business in this District, and having committed one or more acts of infringement in this District. For example, through its website www.seagate.com, Seagate sells its infringing products directly to consumers and promises "free ground shipping" to "48 contiguous United States" of these infringing products.

8. Venue is proper under 28 U.S.C. §§ 1391 and 1400.

BACKGROUND

9. LMS is an entity formed to license patents invented by Dr. David N. Lambeth, a retired Carnegie Mellon professor and recognized pioneer in the area of materials science and magnetic devices, specifically magnetic structures and devices for computer memory devices, including electronic hard disk drives (also referred to herein as "magnetic disk drives" or "HDD").

10. The '988 Patent, entitled "Magnetic Material Structures, Devices and Methods," was issued on October 31, 2006. (A copy of the '988 Patent is attached hereto as Exhibit A)

11. By assignment, LMS is the current owner of '988 Patent, which has the right to sue and recover damages for infringement thereof.

12. The accurate storage and retrieval of data are critical to our information age. Every year, the amount of data that needs to be stored grows exponentially, requiring more and more capacity for individuals and companies alike. Much of the data are stored on hard disk

drives, both those that are internal to computers and stand-alone external drives. Hence, hard disk drive capacity continually needs to be increased.

13. The shrinking of the physical size of the datum unit on the storage medium is essential to accommodate the growing need for data storage without increasing the physical size of the hard drives themselves. If data density were to not have increased over the years, it would have taken hard disk drives the size of a house to store a small music library. In order for this density to be continually increased the HDD magnetic medium must be sufficiently resistant to spontaneous changes of magnetic state. These materials are sometimes referred to as being magnetically hard, or having a high coercivity (resistance to change).

14. The magnetic head (transducer) used to record the data in HDD is composed of various materials and structures, which play a vital role in determining the hard disk drive storage capacity. It is important that the structures be as small as possible and the materials be sufficiently potent to perform the required function of changing the states of the very small areas of the hard magnetic material on the platter, *i.e.*, magnetic media or disk, when energized. At the same time, these transducer materials must be sufficiently magnetically soft such that they relax to a non-magnetized state and do not cause erasure of the data when the transducer is not energized. This changing of the magnetized state on the magnetic disk, platter, is equivalent to modifying or writing the 0's and 1's representing data stored on the platter.

15. For ease of reference, but without limitation, as used herein, the reference to "Hard Disk Drive Devices" shall include computers, electronic equipment, and hard disk drives with magnetic heads and perpendicular magnetic recording media, including but not limited to: hard disk drives, including hard disk drives for inclusion in computers; stand-alone drives and portable drives; laptop and desktop computers with hard disk drives; media players and sound or video recording devices with hard disk drives; gaming systems with hard disk drives; servers and enterprise storage computers; hard disk drive storage devices in automotive vehicles and machinery; and other devices with hard disk drives, including the components such as recording heads and media for such drives.

16. In connection with the '988 Patent, Dr. Lambeth invented a new magnetic material structure for Hard Disk Drive Devices including the following elements:

> (1) a substrate;
> (2) at least one bcc-d layer which is magnetic, forming a uniaxial symmetry broken structure; and
> (3) at least one layer providing a (111) textured hexagonal atomic template disposed between said substrate and said bcc-d layer.

17. Independent claim 1 of the '988 Patent claims the new magnetic material structure set forth above while independent claim 27 claims a magnetic device incorporating the new structure.

18. This new magnetic structure allowed Hard Disk Drive Devices with greater capacity than before, but without an increase in their physical size. Thus, this structure was and continues to be instrumental to the ever-increasing miniaturization of computers and the concomitant increase of data storage capacity.

FIRST CALIM FOR RELIEF
Patent Infringement of United States Patent No. 7,128,988

19. The allegations stated in paragraphs 1-18 are incorporated by reference as though fully set forth herein.

20. Seagate designs and manufactures recording heads for high performance hard disk drives, which infringe the '988 Patent. The following are just a few infringing Seagate models: 1TB HDD Model No.: ST3000DM001, which is representative of other Seagate HDDs and solid state hybrid drives ("SSHDs"), including, *inter alia*, external drives, including Model No. STFG8000400; desktop drives, including Model Nos. ST8000DM002, ST6000DM001, ST5000DM002, ST4000DM000, ST3000DM002, ST2000DM002, ST1000DM004, ST2000DM001, ST1000DM003, ST500DM002ST320DM000, ST250DM000, ST310005N1A1AS-RK, and ST3500641AS-RK; laptop drives, including Model Nos. ST4000LM016, ST3000LM016, ST500LT012, ST500LM024, ST500LT025, ST500LT015, ST500LM021, ST320LM010, and ST320LT012; mobile HDDs, including Model Nos. ST2000LM009, ST2000LM007, ST2000LM010, ST1000LM038, ST1000LM037, and

ST1000LM035; drives for Mac, including Model Nos. STCF500102, STDS1000100, STDS2000100, and STDS4000400; Game Drives, including Model Nos. STEA2000403, STEA4000402, STBD1000101; Desktop SSHD Model Nos. ST1000DX001, ST2000DX001, and ST4000DX001; and kits containing any one of these HDDs and SSHDs (hereinafter referred to as "Accused Seagate Drives").

21. While certain hard drives that Seagate markets may be covered by a license to the '988 patent previously obtained by Samsung Corporation, and transferred with Samsung Corporation's hard drive business, which Seagate acquired in 2011, the majority of its products, including all the models enumerated above, are not subject to this license.

22. Each of the Accused Seagate Drives includes at least one magnetic hard disk along with at least one recording head for writing data to the surface(s) of the magnetic hard disk.

23. Each of the Accused Seagate Drives includes at least one recording head made from Dr. Lambeth's new magnetic material structure. In particular, the Accused Seagate Drives includes a magnetic material structure with the following elements (or equivalents thereto):

> a substrate;
> at least one bcc-d layer which is magnetic, forming a uniaxial symmetry broken structure; and
> at least one layer providing a (111) textured hexagonal atomic template disposed between said substrate and said bcc-d layer.

24. More specifically, the Accused Seagate Drives use a magnetic layer made from at least iron cobalt (Fe,Co) having a bbc-d structure and forming a uniaxial symmetry broken structure as claimed in the '988 patent.

25. The Accused Seagate Drives also use at least one layer of material made from nickel (Ni), nickel alloy, or some other seedlayer material, disposed between a substrate in the recording head and Dr. Lambeth's magnetic layer having a uniaxial symmetry broken structure, as set forth above. This material facilitates the formation of Dr. Lambeth's magnetic layer by providing a (111) textured hexagonal atomic template as claimed in the '988 patent.

26. The magnetic material structures used in the Accused Seagate Drives infringe at least claims 1 and 27 of the '988 patent, and dependent claims thereof, including claims 6, 7, 9, 11, and 13, literally or under the doctrine of equivalents. Therefore, Seagate's hard disk drives, and specifically its magnetic recording heads, which incorporate these infringing structures, also infringe at least claims 1 and 27 of the '988 patent, and dependent claims thereof, including claims 6, 7, 9, 11, and 13.

27. Seagate imports, makes, uses, sells, and offers to sell these magnetic heads, at least in HDDs. Therefore, Seagate is in violation of 35 U.S.C. § 271(a), and has been and continues to directly infringe at least claims 1 and 27 of the '988 Patent, and dependent claims thereof, including claims 6, 7, 9, 11, and 13, literally or under the doctrine of equivalents, by making, using, selling, offering to sell, and/or importing magnetic heads that are incorporated in Hard Disk Drive Devices that are sold in the United States and this District, including but not limited to laptop computers, desktop computers (including Apple iMac), Xbox and Playstation game consoles, and servers.

28. At least as early as March 2011, Seagate was aware of the '988 Patent when it acquired Samsung's HDD business.

29. Upon information and belief, Seagate actively and knowingly aided other entities, including Apple Inc., to make, use, sell, offer to sell and/or import computers and devices that

incorporate structures that infringe at least claims 1 and 27 of the '988 Patent, as well as claims dependent therefrom, including claims 6, 7, 9, 11, and 13.

30. Upon information and belief, Seagate knowingly manufactures and sells magnetic heads that incorporate structures that infringe claims 1 and 27 of the '988 Patent and dependent claims thereof, including claims 6, 7, 9, 11, and 13, to Apple, Inc., and other manufacturers, with the knowledge that these magnetic heads would be included in third-party Hard Disk Drive Devices, such as game consoles, servers, and computers, including Apple iMac computers, and Xbox and Playstation game consoles, manufactured outside of the United States and then sold and/or imported into the United States, thereby infringing at least claims 1 and 27 of the '988 Patent, as well as claims dependent therefrom, including claims 6, 7, 9, 11, and 13.

31. Upon information and belief, Seagate is in violation of 35 U.S.C. § 271(b), by inducing and continuing to induce others to infringe, at least claims 1 and 27 of the '988 Patent, and dependent claims thereof, including claims 6, 7, 9, 11, and 13, literally or under the doctrine of equivalents, by inducing others to import, make, use, sell, and/or offer to sell Hard Disk Drive Devices, including, for example Apple iMac computers, and Xbox and Playstation game consoles, with the above structures in and to the United States and this District. Upon information and belief, the inducing activity includes advertising and marketing materials regarding Seagate's accused products provided to its customers; sales efforts directed at Seagate's customers; presentation of the accused products at industry events and conferences, and other activity by or on behalf of Seagate enticing Seagate's customers to buy Seagate's accused products.

32. LMS has been damaged by Seagate's infringement of the '988 Patent, and is suffering and will continue to suffer irreparable harm and damage as a result of this infringement unless such infringement is enjoined by this Court.

33. This action, therefore, is "exceptional" within the meaning of 35 U.S.C. § 285.

JURY DEMAND

34. LMS hereby demands a jury trial on all issues so triable.

REQUESTED RELIEF

WHEREFORE, LMS demands judgment as follows:

A. An order adjudging Seagate to have infringed the '988 Patent;

B. A permanent injunction enjoining Seagate with its respective officers, agents, servants, employees, and attorneys, and all persons in active concert or participation with any of them who receive actual notice of the order by personal service or otherwise, from infringing the '988 Patent;

C. That this case is "exceptional" within the meaning of 35 U.S.C. § 285;

D. A full accounting for and an award of damages to LMS for Seagate's infringement of the '988 Patent, including with pre- and post-judgment interest;

E. An award of LMS's reasonable attorneys' fees, expenses, and costs; and

F. A grant of such other and further equitable or legal relief as this Court deems proper.

Respectfully submitted,

THE WEBB LAW FIRM

Dated: April 29, 2016

s/ *John W. McIlvaine*

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